Applicants:

Nigel Paul Maynard et al.

Serial No. Filed 10/580,160 May 19, 2006

Page

2 of 11

## **AMENDMENTS TO THE SPECIFICATION:**

Please replace the paragraph beginning at page 4, line 15 with the following amended paragraph:

Attorney Docket No.: 65501-003US1

Client Ref. No.: SHR 504620USPR

In one preferred aspect, the pressure in the constrained environment is above atmospheric. For example, the pressure may be between about 0.5 psi and 40 psi <u>above atmospheric</u>. More preferably, the pressure is between about 3 psi and 30 psi <u>above atmospheric</u>, even more preferably between about 6 psi and 25 psi <u>above atmospheric</u>.

Please replace the paragraph beginning at page 9, line 14 with the following amended paragraph:

A constrained environment is any 'chamber' which may be substantially sealed against pressure drop at least during the heating process of the invention. In a particularly preferred embodiment of the invention the pressure in the constrained environment is actively supplemented or increased above atmospheric pressure such that the boiling point of water within the substrate is raised above 100°C. By way of example, the pressure may be between about 0.5 psi and 40 psi <u>above atmospheric</u>, more preferably between about 3 psi and 30 psi <u>above atmospheric</u>, even more preferably between about 6 psi and 25 psi <u>above atmospheric</u>. However, the heating step of the invention may be conducted under atmospheric or ambient pressure conditions in certain circumstances. In this instance, the pressure within the constrained environment may initially be at ambient pressure but during the heating step may slightly increase above atmospheric pressure.

Please replace the paragraph beginning at page 10, line 21 with the following amended paragraph:

The period of time the substrate is subjected to the RF energy is preferably a time sufficient to heat the substrate uniformly and to an appropriate temperature. In one preferred embodiment, where the pressure in the constrained environment is above atmospheric or ambient pressure, the time will be sufficient to heat the moisture within the substrate to a temperature of greater than the boiling point of water at ambient

Applicants:

Nigel Paul Maynard et al.

Serial No. :

10/580,160

Filed Page May 19, 2006 3 of 11 Attorney Docket No.: 65501-003US1 Client Ref. No.: SHR 504620USPR

pressure. Preferably the temperature created should be one which is sufficient to elevate moisture temperature within the substrate to at least 100°C. Where the pressure of the constrained environment is above atmospheric, it should be appreciated that the boiling point of water will be elevated. In such conditions temperatures may well exceed 100°C without any water boiling. For example, at a pressure of approximately 24 psi above atmospheric the boiling point of water will be approximately 130°C, and at approximately 6.1 psi above atmospheric, the boiling point of water will be approximately 110°C. Under such pressure conditions at a time and temperature decided upon, the pressure constraint can be removed allowing the moisture to boil initially at a temperature substantially above 100°C.

Please replace the paragraph beginning at page 11, line 1 with the following amended paragraph:

In another embodiment, where the pressure in the constrained environment is at about atmospheric or ambient pressure, the heating time should be sufficient to heat the moisture within the substrate to a temperature of below the boiling point of water at ambient pressure. Under such pressure conditions at a time and temperature decided 5 upon, the pressure can be reduced allowing the moisture to boil at a temperature below 100°C. For example, water will boil at approximately 65.6°C if the guage gauge pressure is reduced to minus 11 psi (-75.7 kPa).